VOL. 25 NO. 26 June 27, 1975

Cooperative Economic Insect Report

Issued by
PLANT PROTECTION AND QUARANTINE PROGRAMS
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
U.S.DEPARTMENT OF AGRICULTURE

ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE PROGRAMS
NEW PEST DETECTION AND SURVEY STAFF

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Service serves as a clearing house and does not assume responsibility for accuracy of the material.

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Hyattsville, Maryland 20782

Volume 25 June 27, 1975 Number 26

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

John G. Gammons will retire on June 30 after 10 years as Chief Editor of the "Cooperative Economic Insect Report." Our readers and staff will miss his dedicated service to this phase of agricultural entomology.

Current Conditions

EUROPEAN CORN BORER feeding on 70 percent or more of corn in Missouri, Virginia, and Maryland. (p. 530).

Damage by GRASS BUGS serious in Utah and Nevada. (p. 532).

THRIPS is a problem on soybeans in Kentucky and Indiana. (p. 533).

CITRUS THRIPS heavy on citrus in Arizona. (p. 537).

FACE FLY heavy in Alabama, Kentucky, Illinois, and Missouri. (p. 539).

Detection

New State records include POTATO STEM BORER in New York (p. 531) and a WEEVIL in Pennsylvania (p. 537).

For new county records, see page 543.

Special Reports

Pink Bollworm Quarantines. Map. Centerfold.

Reports in this issue are for week ending June 20 unless otherwise indicated.

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Pink Bollworm Quarantines. Map. Centerfold.

WEATHER OF THE WEEK ENDING JUNE 22

Reprinted from Weekly Weather and Crop Bulletin supplied by National Weather Service, NOAA.

HIGHLIGHTS: For the last week of spring, cool air hovered over the Rocky Mountains and pushed into the High Plains while temperatures averaged above normal in the eastern half of the Nation. In the central States, average temperatures were 4-9 degrees above normal. Typical of late spring, thunderstorms with associated severe weather, were rampant from Montana to Colorado and from the Plains to the east coast. Flooding of small streams posed serious problems in many States. In the Southwest, hot and dry winds kicked up dust storms and increased fire hazards.

PRECIPITATION: Severe thunderstorm activity raged in the Central Plains on Monday. Thunderstorms began developing during the early afternoon from east Kansas into Missouri and spread rapidly to Oklahoma and Arkansas. Scattered activity developed in Illinois and Minnesota. By the days end, violent thunderstorms with heavy rain occurred in northwest Kansas. Severe flooding resulted from storms in Kansas and Missouri. Thundershowers were scattered along the east coast and in the northern and central Rockies. The Gulf States enjoyed a welcome respite from heavy rain. Thunderstorms with heavy rain in northwest Kansas continued into Tuesday and spread into central and eastern Nebraska. Scattered thunderstorms developed Northeast of this area through the Great Lakes and from Arkansas to Ohio. Tornadoes and hail were reported across 8 States. An unusually deep storm for this time of year brought strong winds to northern Arizona and showers to the northwestern quarter of the Nation. Thunderstorms continued along the east coast. Serious agricultural flooding from a previous rain continued on Wednesday in east-central Kansas and threatened in northeast Kansas and eastern Nebraska as renewed thunderstorm activity began. Storms were vigorous in Iowa and northeast through the Lakes area. Thunderstorms increased in the southeastern States and

Weather of the week continued on page 546.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

ARMYWORM (Pseudaletia unipuncta) - KANSAS - First-generation moths emerged. Late instars light on wheat in Ellis, Ellsworth, and Phillips Counties. Parasitism by braconid wasps heavy in wheat in Ellsworth County. (Bell). IOWA - Larvae damaged wheat in Harrison County; 1,000+ acres treated. (DeWitt). MISSOURI - Moderate to heavy in northwest area. Larvae in dense wheat ranged 5-41 per square foot. Parasitism in all fields checked. Parasitism noted in 18-76 percent of larvae. (Munson). MARYLAND - Heavy; injured 35-50 percent of corn in 15-acre field in Baltimore County. (U. Md., Ent. Dept.).

ARMY CUTWORM (Euxoa auxiliaris) - COLORADO - Damaged alfalfa in San Luis Valley. (Nelson). NORTH DAKOTA - Greatly reduced stands of sunflowers. (McBride). MINNESOTA - Severely damaged sunflowers, mainly in field margins, in Big Stone County. (Minn. Pest Rpt.).

CORN EARWORM (Heliothis zea) - KANSAS - Up to half-grown larvae trace in whorls of 25 to 36-inch corn in McPherson and Stafford Counties. (Bell). OKLAHOMA - Damaged 5 percent of ears of sweet corn in Muskogee County. (Okla. Coop. Sur.). MISSOURI - Whorl feeding in one percent of infested corn plants in central area. (Munson). MARYLAND - Moths steadily increasing in blacklight traps on lower Eastern Shore. (U. Md., Ent. Dept.).

CORN LEAF APHID (Rhopalosiphum maidis) - TEXAS - Light on sorghum in Tom Green and McCulloch Counties. Light to moderate in Knox County. Light in Hale County. (McWhorter et al.). OKLAHOMA - Heavy on Washita County sorghum. (Okla. Coop. Sur.). KANSAS - Light in whorls of 5 to 10-inch sorghum in Washington, Dickinson, and Shawnee Counties. (Bell). INDIANA - Colonies noted in Vigo County cornfield on very light soil. Corn about 30 inches tall. (Meyer). FLORIDA - Buildup began on sorghum in Marianna and Walton Counties. (Fla. Coop. Sur.).

GREENBUG (Schizaphis graminum) - NEW MEXICO - Some controls applied to sorghum in Quay County. (N.M. Coop. Rpt.). TEXAS - Colonies in few sorghum fields in Hill and Ellis Counties; beneficial insects numerous. Greenbug light to moderate in Tom Green and Nolan Counties. Very light in Hale County. (Buxkemper et al.). OKLAHOMA - Light on sorghum in Washita County. Scattered and moderate in Jackson County. (Okla. Coop. Sur.). KANSAS - Threatening infestations on sorghum in western Dickinson, eastern Saline, and central Washington Counties; averages as high as 59 per plant on 5-inch sorghum in Dickinson County and 55 on 10-inch sorghum in Washington County. (Bell).

POTATO LEAFHOPPER (Empoasca fabae) - WISCONSIN - Heavy reproduction noted. Many nymphs over half grown in some advanced southern forage sites; adults and nymphs averaged up to 12 per sweep. Adults 25-30 in potatoes in Sauk, Iowa, Adams, and Waushara Counties. No immatures. Light injury on Grant County potatoes. (Wis. Ins. Sur.). INDIANA - Nymphs on soybeans throughout central district. Nymphs 0-18, mostly 0-2, per 10 trifoliate leaves. Heavier, 0-4, in northern half of central districts; plants usually 2-4 trifoliates with occasional field with 5 trifoliates. (Meyer). OHIO - Averages per sweep in Medina County: 0.8 in new seeding and 0.45 in established seedings. Averaged 43 per 100

sweeps of new growth alfalfa in central and west-central areas. Counts of potato leafhopper per 100 sweeps by county: Union 26, Auglaize 10, Shelby 60, Mercer 34, and Preble 84. (Lewis). NEW YORK - First active June 10 in Ontario County and June 14 in Tompkins County. (Muka).

SPOTTED ALFALFA APHID (Therioaphis maculata) - NEW YORK - Collected from alfalfa stems May 31 in Tompkins County. Collections in 1973 and 1974 first considered as wind-dispersed migrants. Recent collections believed to represent overwintered resident populations. (Helgesen, Cooley).

TOBACCO BUDWORM (Heliothis virescens) - FLORIDA - Recently became problem on tobacco; moderately heavy last 3-4 weeks on shade-grown type at Quincy, Gadsden County. Moderate on flue-cured tobacco; excellent control around Live Oak, Suwannee County. (Fla. Coop. Sur.).

TOBACCO HORNWORM (Manduca sexta) - FLORIDA - Very heavy on untreated flue-cured tobacco at Live Oak, Suwannee County; controlled in commercial plantings. (Fla. Coop. Sur.).

CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (Ostrinia nubilalis) - KANSAS - Eggs hatched on corn in McPherson, Wabaunsee, and Shawnee Counties. (Bell). MISSOURI - Moderate to heavy on early planted corn throughout north-central and northwest areas. Leaf feeding on 39-85 percent of plants. Second and third instars 1-5 per infested plant. (Munson). ILLINOIS - First-generation whorl feeding common in early planted fields throughout southern half of State. Damage light to moderate except for two 70-inch fields in Jackson County averaging 72-percent whorl feeding. Moth flight and egg laying common throughout northern half of State. Most larvae second and third instars. (Ill. Ins. Rpt.). WISCONSIN - Egg masses light on corn in central, south-central, and southwest districts. Most corn too short to attract many adults. (Wis. Ins. Sur.).

OHIO - European corn borer adult activity increased. Averaged 1.7 egg masses per 100 plants and 18.7 eggs per mass in Union, Mercer, and Darke Counties in 3 of 10 fields examined. (Lewis). ALABAMA - Previously reported mixed infestation of this species and Diatraea grandiosella (southwestern corn borer) in 300 acres of corn in Cherokee County now found to infest 10-33 percent of several thousand acres in this county. Represents much heavier first generation of both species than has ever occurred. (Hall et al.). KENTUCKY - Larvae in midribs and whorls of corn during previous and current periods in west and central areas. Infestations appeared average in western areas. Light to moderate in Todd, Lyon, Graves, Henderson, and Trigg Counties. Heaviest in area of Graves County where larvae 2.3-2.5 per plant on 95-99 percent of stalks. (Barnett). VIRGINIA - Damaged 80 percent of corn seedlings in 30-acre field in King and Queen County. (Sedivy). MARYLAND - Whorl infestation averaged over 80 percent in 20 acres of field corn in Worcester County. (U. Md., Ent. Dept.). DELAWARE - All instars on corn in Sussex County. (Burbutis).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - OKLAHOMA - Overwintered adults began to emerge in Texas County June 17. (Okla. Coop. Sur.). KANSAS - Moths emerged in Kiowa and Stafford Counties. (Bell).

FALL ARMYWORM (Spodoptera frugiperda) - FLORIDA - Problem last 10 days in young field corn, required treatments in Gadsden and Jackson Counties. Larvae 2-3 per stalk in one field. (Fla. Coop. Sur.). OKLAHOMA - First of season. Light on sorghum in Washita County. (Okla. Coop. Sur.).

STALK BORER (Papaipema nebris) - OHIO - Infested 2 percent of corn in Madison County field. (Lewis). VIRGINIA - Damaged 80 percent of corn seedlings in 30-acre field in Washington County. Required replanting. (Derting). MARYLAND - Population levels in field corn far below those of past 2 years. (U. Md., Ent. Dept.).

POTATO STEM BORER (Hydroecia micacea) - NEW YORK - Larvae, 0.75-1.25 inches, collected by A. Muka June 5, 1975. Feeding on 3 to 5-inch tall corn in Canton and Hopkinton Townships, St. Lawrence County. Plants wilted and brown; 2 central leaves each contained single larva. Identified by J.G. Franclemont. (Muka). This is a new State record. (Willson).

CORN ROOTWORMS (Diabrotica spp.) - SOUTH DAKOTA - Initial hatch; first instars in southeast area corn June 18. (Walgenbach). MISSOURI - D. virgifera (western corn rootworm) heavy in southwest area popcorn. Larvae and pupae 25-30 per plant in severely damaged field. (English). Hatched in north-central and northwest areas. (Munson).

SORGHUM MIDGE (Contarinia sorghicola) - TEXAS - Very light on sorghum in Blackland area and throughout south-central area. Observed in all blooming sorghum fields in Rio Grande Valley area, as high as 40 adults per head in field south of Weslaco. (Hoelscher et al.).

SMALL GRAINS

AN APHID (Rhopalosiphum rufiabdominalis) - ARKANSAS - Further survey of rice in southeast and east-central areas indicate infestations not widespread and have disappeared for present. Damaged very small percentage of plants in about one-third of ricefields in Arkansas, Desha, Jefferson, and Lincoln Counties. Some observed in Arkansas County June 17-18. (Boyer).

ENGLISH GRAIN APHID (Macrosiphum avenae) - NEVADA - Ten per stem on 30 acres of winter wheat at Lovelock, Pershing County. (Munk). WISCONSIN - Increased on spring grains in most areas. Up to 12 per sweep in Dane County field. (Wis. Ins. Sur.).

BARLEY THRIPS (Limothrips denticornis) - NORTH DAKOTA - Migrants evident on Dickey County barley; ranged up to 150 per 100 sweeps. Up to 200 per 100 sweeps in Eddy County. (Scholl).

TURF, PASTURES, RANGELAND

GRASS BUGS - UTAH - Labops hesperius badly discolored large areas of crested wheatgrass and some other planted grasses in Diamond Fork Canyon, Utah County. Mating and feeding on grass seed. (Bowers). NEVADA - Irbisia brachycera caused heavy leaf stippling on crested wheatgrass southwest of Winnemucca, Humboldt County. Many plants with incompletely developed heads. (Lauderdale).

A SCARAB BEETLE (Ataenius spretulus) - OHIO - Damage increased on Poa annua (annual bluegrass) on golf courses at Cincinnati, Hamilton County. Larvae as high as 570 per square foot. First pupae June 16. (Niemczyk).

RANGE CATERPILLAR (Hemileuca oliviae) - NEW MEXICO - Young larvae observed south of Grenville and near Sofia, Union County. Larvae observed along Colfax and Harding County line southeast of Abbott where activity heavy in remote area of one ranch. Active at Chicosa Lake State Park, Harding County. (N.M. Coop. Rpt.).

GRASSHOPPERS - MISSOURI - Melanoplus spp. hatched in southern area pastures. Up to 100, first and second instars per square yard of grazed pastures in south-central area. (Huggans). MISSISSIPPI - Conocephalus fasciatus adults and nymphs increased in pastures. Averaged 22 per 25 sweeps in Bermuda grass stand in Noxubee County. (Robinson).

FORAGE LEGUMES

ALFALFA WEEVIL (Hypera postica) - WASHINGTON - Adults and larvae heavy on 120-acre alfalfa seed field east of Odessa, Lincoln County. (Kulp, Antonelli). IDAHO - Larvae 25-50 and adults 1-3 per sweep of alfalfa in Owyhee County June 11. (Baird). NEVADA - Larvae averaged 100+ per sweep of hay alfalfa at Lund and Preston, White Pine County. (Lauderdale). UTAH - Conspicuously infested Nibley and College Ward area, Cache County. (Youssef). Heavy in field at Lewiston. (Davis, Spykerman). NEW MEXICO - Subsiding in Bernalillo and Valencia Counties following first cutting. (N.M. Coop. Rpt.). SOUTH DAKOTA - Larvae 47% per 100 sweeps of alfalfa in field west of Vermillion, Clay County; field showed good regrowth. (Walgenbach). OHIO - Larvae light in regrowth alfalfa, averaged 110 per 100 sweeps in Madison, Union, Clark, Shelby, Auglaize, Mercer, Darke, and Preble Counties. Larvae 418 and adults 5 per 100 sweeps in Wayne County uncut alfalfa. (Lewis).

ALFALFA SNOUT BEETLE (Otiorhynchus ligustici) - NEW YORK - Adults averaged 6 per 100 sweeps in field of 24-inch alfalfa in Wayne County on June 11. Unusual situation, normally search for beetles near ground level. (Willson).

PEA APHID (Acyrthosiphon pisum) - NEVADA - Still light, averaged less than 6 per sweep, on seed alfalfa at Orovada, Humboldt County. (Stitt). Averaged less than 3 per sweep on hay alfalfa in Diamond Valley, Eureka County. (Peters). Averaged 12 per sweep on seed alfalfa at Lovelock, Pershing County. (Munk). OKLAHOMA - Averaged 20 per 10 sweeps of alfalfa in Canadian County. (Okla. Coop. Sur.). WISCONSIN - Increased on alfalfa and peas. Up to 12 per sweep common on alfalfa. Populations in peas erratic. Up to 10 per sweep in Columbia, Dane, Dodge, Waushara, and Adams Counties. (Wis. Ins. Sur.).

VARIEGATED CUTWORM (Peridroma saucia) - MISSOURI - Light to moderate populations spotty in alfalfa fields throughout north-central and northwest areas. Larvae ranged 1-16 per square foot. (Munson). IOWA - Larvae continued to damage alfalfa regrowth in Shelby, Harrison, Mills, Pottawattamie, and Cass Counties. Larvae ranged 1-1.75 inches long with pupae numerous in some fields. Some fields brown. (DeWitt).

SOYBEANS

MEXICAN BEAN BEETLE (Epilachna varivestis) - ALABAMA - Damaging populations developed in few soybean fields in Calhoun County. (Mathews). INDIANA - Adults decreased in southwest and south-central districts; first and some second instars present. Pupated in single Clay County field. (Sloderbeck). NORTH CAROLINA - Treatment required in 30 acres of soybeans in Hertford County. (Rogister, Van Duyn). MARYLAND - Overwintered adults scarce; first and second instars continued to increase on soybeans in southern sections. (U. Md., Ent. Dept.).

GRAPE COLASPIS (Colaspis brunnea) - NORTH CAROLINA - Larvae damaged soybean roots in 40-acre field in Washington County. Severe stunting, yellowing, and dead plants in all spots. Visibly damaged 10-15 percent of plants. (Van Duyn, Whitford).

BEAN LEAF BEETLE (Cerotoma trifurcata) - MARYLAND - Adults heavier than normal on soybeans in southern sections. (U. Md., Ent. Dept.).

THREECORNERED ALFALFA HOPPER (Spissitilus festinus) - MISSISSIPPI - Adults averaged 3 per 25 sweeps of 8 to 10-inch soybeans in 200 acres in Oktibbeha County week ending June 13. (Robinson). OKLAHOMA - Averaged about 20 per 10 sweeps in most soybeans in Sequoyah, Haskell, Wagoner, Le Flore, and McCurtain Counties. Damage light. (Okla. Coop. Sur.).

A THRIPS (Sericothrips variabilis) - KENTUCKY - Counts of 50-60 per soybean leaflet declined to 0-10 per leaflet in western area. Some leaf drop. Problem complicated by disease, weather, and other conditions. Heavy on 80 percent of soybeans in Graves County, moderate on 50 percent in southern border area. (Barnett). INDIANA - Decreases in southern districts real or apparent due to increased soybean foliage. Herbicide damage, more common than in past, contributed to thrips damage. In one field in early bloom, feeding covered up to 50 percent of leaf surface on nearly all leaves. (Sloderbeck). In central districts, heavy populations, especially nymphs, observed only in Clay County, but no more than 30 per trifoliate leaf. Much lighter in west-central, central, and east-central districts. Nymphs present south of Indianapolis, Marion County; none or few nymphs north of that city. Mating in central districts north of Indianapolis, where adults averaged fewer than one per 10 trifoliate leaves. (Meyer).

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - FLORIDA - First larva of season on soybeans at Quincy, Gadsden County, June 11. (Fla. Coop. Sur.).

PEANUTS

TOBACCO THRIPS (Frankliniella fusca) - FLORIDA - Only noticeable pest of peanuts in Jackson County. Sprays required by May 28. Currently, still a problem on untreated peanuts in experimental plots near Marianna, Jackson County. All plants damaged to some extent, but only 10 percent of plants damaged in plots where best treatment used. (Fla. Coop. Sur.).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - TEXAS - Increasing throughout Comanche County; ranged 3-9 percent infestation. (Curtis).

COTTON

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Punctured squares increased from one to 16 percent in Rio Grande Valley dryland cotton fields. Activity increased in irrigated cotton; highs of 72-percent punctured squares in one field. Third generation emerged; many young, red adults in blooms and squares. Most fields treated early in week needed second treatment by weekend due to new weevil emergence. Overwintered adults heavy in Collin, Hunt, and Delta Counties. Heavy in Hill and Ellis Counties. Blackland area cotton squaring rapidly; treatment almost completed. Punctured squares up to 40-45 percent in untreated fields. Male and female ratio 1:1. Most overwintered adults appear to have moved into cotton. Infested several counties from the gulf coast to Blacklands. Punctured squares 30-70 percent in hot spots. Overall populations lighter this year than last year. Overwintered adults increased in pheromone traps in Schleicher County. Populations found in Runnels County. Leggett traps caught 284 adults in one trap and 69 in another in Knox County, and caught 8 in Collin County. (Deer et al.).

OKLAHOMA - Pheromone traps (124 traps) in Jackson County caught 93 boll weevils on June 5, 122 on June 12, 23 on June 16, and 3 on June 19. (Okla. Coop. Sur.). MISSISSIPPI - Some punctured squares found in hill section. Live weevils in most fields. (Robinson). ALABAMA - Overwintered adults averaged 4.18 per sex-lure trap in Cherokee County on one farm for last period. Extremely high, heavier than ever before for this area, in fields totaling 400 acres in Cullman County. (Hall et al.).

BOLLWORMS (Heliothis spp.) - ALABAMA - H. zea (bollworm) and H. virescens (tobacco budworm) eggs, larvae, and adults light in Limestone County. H. virescens dominant. (Eich et al.). TEXAS - H. zea activity relatively light in Rio Grande Valley. Four of 99 fields above economic threshold of 15 percent damage; treatment successful in all 4 fields. Most fields had less than 30 percent eggs, less than 10 percent larvae, and less than 10 percent damage. Few eggs in Hill and Ellis Counties. Eggs heavy on some older Blackland area cotton. Larvae past peak in south-central area. (Norman et al.).

COTTON FLEAHOPPER (Pseudatomoscelis seriatus) - TEXAS - Medium to heavy in many dryland cotton fields in Rio Grande Valley. Highs of 54 per 100 plant terminals (not counting more than 1 per plant terminal). No economic damage. Still heavy in fields that have not yet squared. Remain light in Delta, Collin, and Hunt Counties,

but cotton fleahopper increased in Hill and Ellis Counties. Square loss heavy in several Blackland area fields. Infestations up to 80 percent in parts of Hill and Navarro Counties. (Turney et al.). OKLAHOMA - Ranged 4-53 per 100 terminals in Harmon, Jackson, and Tillman Counties. (Okla. Coop. Sur.).

THRIPS - TEXAS - Major pests on Panhandle cotton. Populations continued to damage cotton planted 2 to 3 weeks ago in Hill and Ellis Counties. Older cotton outgrowing damage. Heavy damage in Nolan County; spotted, light damage elsewhere. Heavy in some fields in Fisher, Hardeman, Haskell, and Jones Counties. (Clymer et al.).

LYGUS BUGS (Lygus spp.) - TEXAS - Heavy square loss in Hill and Ellis Counties. Extremely heavy in cotton surrounded by grain sorghum or sunflowers. As high as 6-7 on 13 row feet of cotton, in several Hill County fields. Increased throughout Blackland area. (Buxkemper, Hoelscher).

MISCELLANEOUS FIELD CROPS

SUNFLOWER MOTH (Homoeosoma electellum) - TEXAS - Increased rapidly on sunflowers in Blackland counties. Aerial applications applied to most fields checked, but control in some fields moderate to poor. Larvae feeding on heads in Delta County. Many adults in Hale County; egg laying started. Populations noted in 2 fields in Jones County. Moderate in Nolan County. Adults and larvae at Lubbock, Lubbock County. Increased in Milam, Brazos, and Robertson Counties. (Hoelscher et al.).

CARROT BEETLE (Bothynus gibbosus) - OKLAHOMA - Light trap catches by county: Greer 1,759; Tillman 1,313; and Jackson 30. (Okla. Coop. Sur.). TEXAS - Adults up to 800 per night in light traps at Lockett, Wilbarger County. Light on sunflowers in Motley County. (Boring).

SUNFLOWER BEETLE (Zygogramma exclamationis) - MINNESOTA - Many egg clusters with 5-20 eggs per cluster on Red River Valley sunflowers. (Minn. Pest Rpt.).

COTTON FLEAHOPPER (Pseudatomoscelis seriatus) - OKLAHOMA - Ranged 1-5 per plant on Tillman County sunflowers. Heavy in Jackson and Harmon Counties. (Okla. Coop. Sur.).

BEANS AND PEAS

SEEDCORN MAGGOT (Hylema platura) - WISCONSIN - Larval injury noted in central and south-central districts. Damaged 25 to almost 50 percent of lima bean fields planted last 14 days of May in Dane and Jefferson Counties. Damage averaged 35, 15, and less than 5 percent in cucumbers, soybeans, and corn, respectively, in central district. Wet, humid, and unseasonably cool weather contributed to slow crop growth and resultant damage. Populations up significantly statewide. (Wis. Ins. Sur.).

Samples of cotton linters of the usual trade size are exempt. Samples may be assembled in a single package for shipment.

7. Cotton waste produced at cotton gins, cottonseed oil mills, and cotton textile mills.

   Lint cleaner waste is exempt if compressed to a minimum of 22 pounds per cubic foot.

8. Cotton gin trash.

9. Used bagging and other used wrappers for cotton.

10. Used cotton harvesting equipment and used cotton ginning and cotton oil mill equipment.

11. Okra and kenaf, including all parts of such plants except canned or frozen okra.

    Edible okra is exempt if produced during the period December 1 to May 15 inclusive, except that okra consigned to California is exempt only if produced during the period of January 1 to March 15 inclusive.

12. Any other products, articles, or means of conveyance of any character whatsoever, not covered by the above, when it is determined by an inspector that they present a hazard of spread of the pink bollworm and the person in possession thereof has been so notified.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1975-673-461

THE FOLLOWING REGULATED ARTICLES REQUIRE A CERTIFICATE OR PERMIT YEAR-ROUND EXCEPT AS INDICATED:

1. Cotton and wild cotton, including all parts of such plants.

2. Seed cotton.

3. Cottonseed.

4. Cottonseed hulls.

5. Cotton lint.

   Baled cotton lint is exempt if compressed to a minimum of 22 pounds per cubic foot.

   Baled cotton lint moving from the generally infested area into the suppressive area is exempt if the lint is from seed cotton produced in the suppressive area and moved to the generally infested area for ginning, provided the identity of the baled cotton lint is maintained.

   Samples of cotton lint of the usual trade size are exempt. The samples may be assembled in a single package for shipment.

6. Cotton linters.

   Linters are exempt if compressed to a minimum of 22 pounds per cubic foot.

   Samples of cotton linters of the usual trade size are exempt. Samples may be assembled in a single package

PINK BOLLWOR

U.S. DEPARTM
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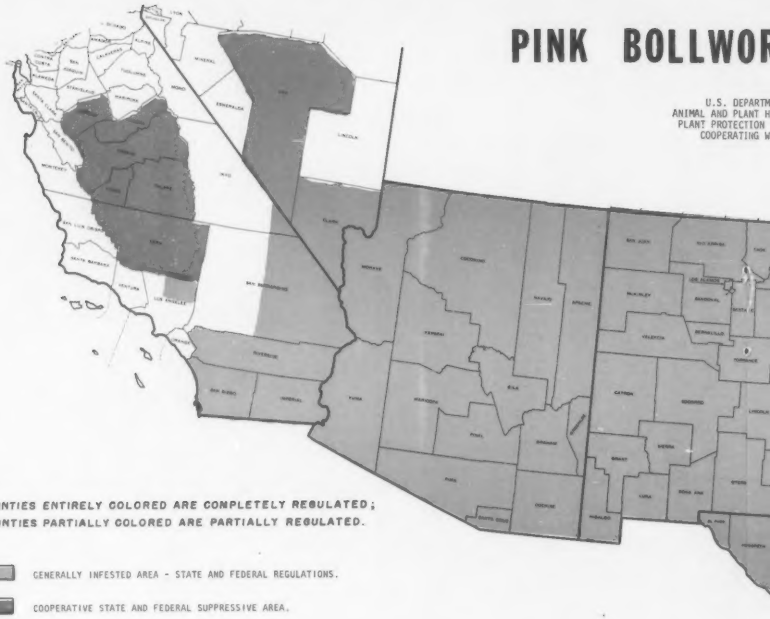


COUNTIES ENTIRELY COLORED ARE COMPLETELY REGULATED;
COUNTIES PARTIALLY COLORED ARE PARTIALLY REGULATED.

GENERALLY INFESTED AREA - STATE AND FEDERAL REGULATIONS.

COOPERATIVE STATE AND FEDERAL SUPPRESSIVE AREA.

RESTRICTIONS ARE IMPOSED ON MOVEMENT OF REGULATED ARTICLES FROM A REGULATED AREA AS FOLLOWS:

1. RED INTO OR THROUGH GREEN OR WHITE.
2. GREEN INTO OR THROUGH WHITE.
3. GREEN INTO GREEN.
4. WITHIN GREEN.*

* IF IT IS DETERMINED BY THE INSPECTOR THAT A HAZARD OF SPREAD EXISTS.

CONSULT YOUR STATE OR FEDE
INSPECTOR OR YOUR COUNTY A
REGARDING EXACT AREAS UNDE
REQUIREMENTS FOR MOVING RE

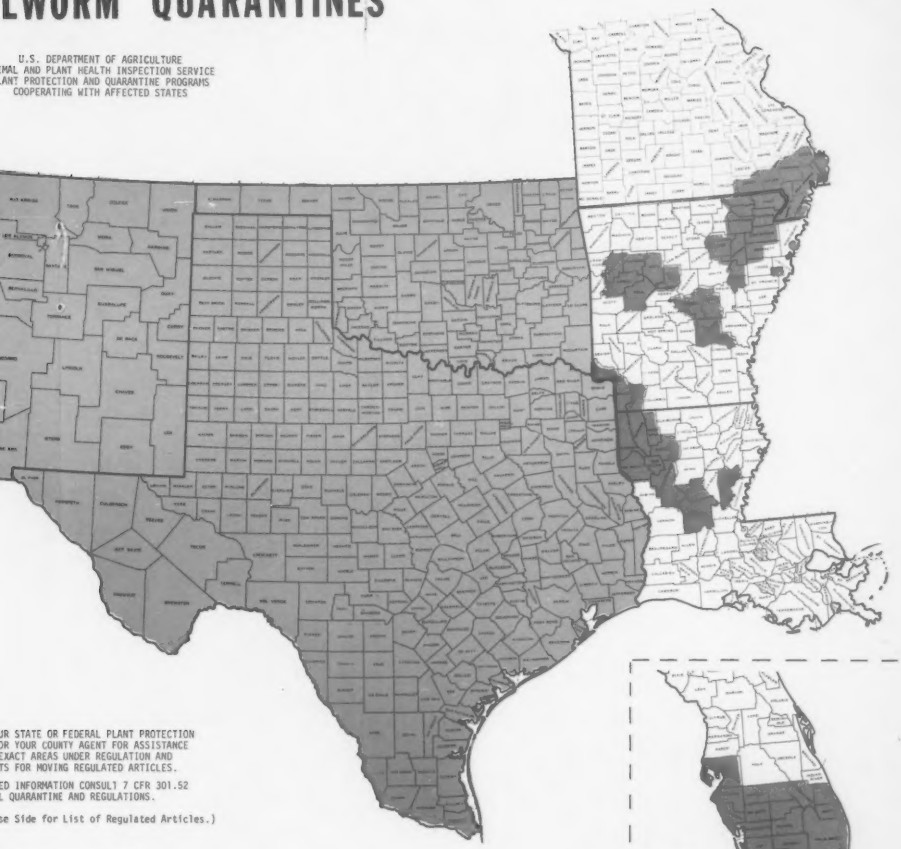
FOR DETAILED INFORMATION C
FOR FEDERAL QUARANTINE AND

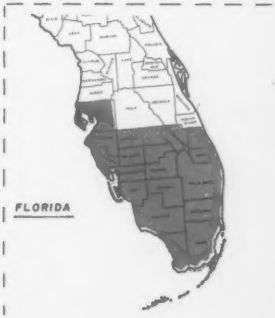
(See Reverse Side for List

Revised March

LWORM QUARANTINES

U.S. DEPARTMENT OF AGRICULTURE
MAL AND PLANT HEALTH INSPECTION SERVICE
ANT PROTECTION AND QUARANTINE PROGRAMS
COOPERATING WITH AFFECTED STATES





UR STATE OR FEDERAL PLANT PROTECTION
OR YOUR COUNTY AGENT FOR ASSISTANCE
EXACT AREAS UNDER REGULATION AND
TS FOR MOVING REGULATED ARTICLES.

ED INFORMATION CONSULT 7 CFR 301.52
L QUARANTINE AND REGULATIONS.

se Side for List of Regulated Articles.)

Revised March 17, 1975

DECIDUOUS FRUITS AND NUTS

CODLING MOTH (Laspeyresia pomonella) - NEW MEXICO - Moth averages ranged 6.0-115.3 per pheromone trap in 9 counties for last period. (N.M. Coop. Rpt.). CALIFORNIA - In apple fruit at Santa Clara, Santa Clara County. (Cal. Coop. Rpt.). IDAHO - Pheromone trap at Moscow, Latah County, caught 4 males on June 12, 3 on June 13, one on June 14, and 5 on June 18. (Portman). WASHINGTON - Peak flights ended June 2 in latest areas of Yakima Valley. First-brood entries in apple calyx near Union Gap June 3. First to third instars near Parker June 3. Side entries near Fruitvale June 9. First-brood entries in pears at Prosser, Yakima County, June 11. (Johnson et al.). MICHIGAN - Pheromone trap catches averaged 3 per trap per night at Grand Rapids, Kent County. (Schwallier).

OBLIQUEBANDED LEAFROLLER (Choristoneura rosaceana) - MICHIGAN - First males in pheromone traps in Allegan, Berrien, Kalamazoo, and Oceana Counties. (Olsen). NEW YORK - First adults of season in pheromone traps June 11 in Ontario County and June 15 in Wayne County. (Reissig et al.).

REDBANDED LEAFROLLER (Argyrotaenia velutinana) - KENTUCKY - Adults averaged 30.6 per pheromone trap May 27 to June 17 in Caldwell County apple orchard. (Barnett, Raney).

PEACHTREE BORER (Sanninoidea exitiosa) - OHIO - First males of season at Wooster, Wayne County, June 16. (Boggs, Nielsen).

SHOTHOLE BORER (Scolytus rugulosus) - WASHINGTON - First summer adults infested trunk of weak cherry tree at Buena, Yakima County, June 13. (Eves et al.).

CHERRY FRUIT FLY (Rhagoletis cingulata) - MICHIGAN - Steady emergence of adults in Berrien County; daily tallies ranged 18-39. (Hanna). NEW YORK - First adults of season June 13 in Wayne County. (Tette).

WESTERN CHERRY FRUIT FLY (Rhagoletis indifferens) - OREGON - First adult in Marion County June 6 at Salem. Adults emerged from caged cherries June 8 and peaked June 15 in large orchard near McCleay, Marion County. (Roberts, Long).

SAN JOSE SCALE (Quadraspidiotus perniciosus) - WASHINGTON - Newly hatched crawlers and later instars on apple at Sunnyside, Yakima County, June 15. (Eves et al.). CALIFORNIA - On apple at San Jose, Santa Clara County. (Cal. Coop. Rpt.).

APPLE APHID (Aphis pomi) - WASHINGTON - First winged females on apples near Parker, Yakima County, June 9. (Johnson et al.).

EUROPEAN RED MITE (Panonychus ulmi) - WASHINGTON - First adults of second generation near Parker, Yakima County, June 9. (Hudson et al.). MICHIGAN - Rapid buildup in some apple pest management blocks. Typhlodromus fallacis (a phytoseiid mite) not in sufficient numbers to achieve control. (Olsen). NEW YORK - Second brood hatched June 13 in Wayne County. (Tette).

PECAN NUT CASEBEARER (Acrobasis nuxivorella) - TEXAS - Damaged untreated pecans in Haskell, Wilbarger, and Wichita Counties. Damage light in most counties in San Angelo area. (Boring, McWhorter).

FALL WEBWORM (Hyphantria cunea) - TEXAS - Continued to increase on pecans in Blackland and south-central areas. More problems on trees in towns and cities than in commercial groves. Damaged foliage in several groves in Young County. (Hoelscher et al.).

CITRUS

CITRUS THRIPS (Scirtothrips citri) - ARIZONA - Sprays applied to heavy infestations on 2,000 acres of citrus at Yuma, Yuma County, with additional groves to be treated. Much damage expected due to curtailment of treatments by high winds of past few days. (Ariz. Coop. Sur.).

CITRUS SNOW SCALE (Unaspis citri) - FLORIDA - Infested 10 percent (25 percent in one block) of 14,000 citrus plants in northern Lake County nursery. (Fla. Coop. Sur.).

FALL WEBWORM (Hyphantria cunea) - CALIFORNIA - Adults fed on grapefruit foliage in Bakersfield, Kern County. (Cal. Coop. Rpt.).

YUMA SPIDER MITE (Eotetranychus yumensis) - ARIZONA - Unusually heavy at Yuma, Yuma County, for this time of year on backyard and commercial citrus. (Ariz. Coop. Sur.).

OTHER TROP. & SUBTROP. FRUITS

BLACK SCALE (Saissetia oleae) - CALIFORNIA - Damaged olive trees and fruit at Sunnyside, San Diego County. (Cal. Coop. Rpt.).

SMALL FRUITS

A BOSTRICHID BEETLE (Polycaon stoutii) - CALIFORNIA - Adults one per stem in wine grapevines at Sonoma, Sonoma County. (Cal. Coop. Rpt.).

STRAWBERRY APHID (Chaetosiphon fragaefolii) - CALIFORNIA - Infested strawberry plants at Fremont, Alameda County. (Cal. Coop. Rpt.).

GARDEN SYMPHYLAN (Scutigerella immaculata) - WASHINGTON - Damaged several acres of strawberries at Harrah, Yakima County. (Wade, Howell).

ORNAMENTALS

A WEEVIL (Magdalis barbicornis) - PENNSYLVANIA - Adults noted on Pyracantha sp. at Jenkintown, Montgomery County, on May 23, 1975, and on Malus sp. on June 2. Collected by F. Stearns and A. Wheeler. Determined by F. Negley; confirmed by R.E. Warner. This is a new State record. (Kim).

EUONYMUS SCALE (Unaspis euonymi) - OHIO - Hatched; crawlers migrated onto Euonymus vegetus in Wayne County. (Balderston). TEXAS - Heavy; damaged euonymus in Wilbarger and Motley Counties. (Boring).

BRISTLY ROSESLUG (Cladius isomerus) - CALIFORNIA - Defoliated roses at San Leandro, Alameda County. Pest now becoming more common. (Cal. Coop. Rpt.).

BIRCH LEAFMINER (Fenusa pusilla) - WISCONSIN - Damage statewide. Severe on ornamental and forest trees in Lincoln, Langlade, Marathon, Menominee, Oneida, and Vilas Counties. (Wis. Ins. Sur.).

FOREST AND SHADE TREES

NANTUCKET PINE TIP MOTH (Rhyacionia frustrana) - KANSAS - First-generation moths emerged in Saline County; infestation heavy on nursery pines. (Bell).

SPRUCE BUDWORM (Choristoneura fumiferana) - OHIO - First adult taken in blacklight trap June 14 in Wayne County. Currently averaged 18.7 moths per night for 3 traps. (Arnold et al.).

ARBORVITAE LEAFMINER (Argyresthia thuiella) - MICHIGAN - Second year of severe damage to arborvitae and cedar, both ornamental and native. (Wallner).

LINDEN LOOPER (Erannis tiliaria) - PENNSYLVANIA - Larvae of this species and Alsophila pometaria (fall cankerworm) damaged 50-75 percent of 40,000 acres in Allegheny National Forest in Warren and McKean Counties by June 9. (Gearhart).

ELM LEAF BEETLE (Pyrrhalta luteola) - KENTUCKY - Damage to trees light statewide, heaviest in central area. (Barnett). MISSISSIPPI - Defoliation light to moderate on Jefferson County elms. (Robinson). CALIFORNIA - Adult emergence early and heavy. Larvae heavy on lower leaves, 10-50 per leaf. Treatment provided one of most complete cleanup in years at Sacramento, Sacramento County. (Cal. Coop. Rpt.).

LOCUST LEAFMINER (Xenochalepus dorsalis) - ALABAMA - Black locust trees on lawns and roadsides damaged in Limestone County, trees 50 percent "browned". (Wilson, Cain). KENTUCKY - Damage began to appear on locust statewide. (Barnett).

A GRASSHOPPER (Dendrotettix quercus) - OKLAHOMA - Heavy on oaks, especially post oak, in Little River State Park area, Cleveland County; light on oaks at junction of State Highways 9 and 102 in Pottawatomie County on June 19. Collected and determined by D.C. Arnold. Pottawatomie is a new county record. Heavy in some areas of Creek County with movement to lawns and gardens. Also in one location in Payne County. (Okla. Coop. Sur.).

BROWN SOFT SCALE (Coccus hesperidum) - CALIFORNIA - Infested boxelder trees at Modesto, Stanislaus County, and English laurel at Fremont, Alameda County. (Cal. Coop. Rpt.).

A CICADA (Okanagana annulata) - NEVADA - Adults 8-10 per evergreen tree and shrub on 2,000 acres at Spring Creek, Elko County. (Peters).

MAN AND ANIMALS

SCREWWORM (Cochliomyia hominivorax) - Total of 245 cases reported from continental U.S. during June 8-14 as follows: Texas 237, New Mexico 1, Arizona 7. Total of 35 cases confirmed from Mexico. Number of sterile flies released in U.S. this period totaled 137,252,800 as follows: Texas 122,402,800; New Mexico 4,150,000; Arizona 10,700,000. Total of 33,106,400 sterile flies released in Mexico. (Vet. Serv.).

HORN FLY (Haematobia irritans) - ILLINOIS - Averaged 140 per animal in central area. (Ill. Ins. Rpt.). MISSISSIPPI - Adults averaged 400+ on mixed beef breeds in Oktibbeha, Clay, and Lowndes Counties week ending June 13. Currently averaged 200+ per cow in Tunica, Bolivar, Sunflower, and Issaquena Counties. Up to 1,000+ on cattle in Newton, Carroll, Clay, Monroe, and Oktibbeha Counties. (Robinson). TEXAS - Continued heavy on untreated cattle in north-central area. Moderate to heavy on beef cattle in Navarro, Hill, McLennan, Bell, Coryell, and Falls Counties. Exceeded 1,000 per animal in some herds. Continued increase throughout Rolling Plains and Edwards Plateau areas. Heavy in Knox County. Moderate to heavy in Wichita and Young Counties. (Turney et al.). OKLAHOMA - Ranged 600-625 per head on cattle in Payne County; heavy in Jackson and Kiowa Counties; moderate in Garfield and Comanche Counties. (Okla. Coop. Sur.).

FACE FLY (Musca autumnalis) - ALABAMA - Extremely heavy on Cullman County cattle where controls ineffective. (Barker et al.). MISSISSIPPI - Adults still serious problem statewide week ending June 13. Average per face on beef cattle by county as follows: Oktibbeha 15, Clay 7, Marshall 20, Noxubee 10. (Robinson). KENTUCKY - Continued heavy in all areas. (Barnett). ILLINOIS - Averaged 20 per animal in central area. (Ill. Ins. Rpt.). MISSOURI - Heavy in south-central, southwest, north-central, and northwest areas. Populations ranged 20-50 per head in southern areas and 8-34 per head in northern areas. (Huggans, Munson).

STABLE FLY (Stomoxys calcitrans) - WISCONSIN - Cattle annoyance moderate in parts of Calumet, Polk, and Kewaunee Counties. (Okla. Coop. Sur.). ILLINOIS - Averaged 15 per animal in central area. (Ill. Ins. Rpt.).

TABANID FLIES - INDIANA - Chrysops spp. heavy in wooded areas along Wabash River, Warren County. (Chandler). Adults more common than recently. Total of 8 species collected, C. callidus dominant, in 9 counties. (Meyer). MISSISSIPPI - Tabanus quinquevittatus and Tabanus spp. heavy, up to 10 per face in Delta counties from De Soto to Sharkey and Issaquena Counties. Many noted on backs and legs of cattle. (Robinson). OKLAHOMA - T. atratus and other species 4-5 per head in Payne County area; T. lineola and Hybomitra spp. averaged less than one per head in second area. (Okla. Coop. Sur.).

A BLACK FLY (Simulium vittatum) - IDAHO - Adults very heavy at Murtaugh, Twin Falls County, with abundant egg laying in mainline canal by June 18. This large population earlier than in past few years. (Sandvol).

MOSQUITOES - WISCONSIN - Somewhat subsided, but annoyance still severe on warm, humid evenings in many localities. Cattle annoyance severe in parts of Outagamie, Kawaunee, Calumet, and Polk Counties. (Okla. Coop. Sur.). MINNESOTA - Light trap catches increased; Aedes vexans, A. cinereus, Coquillettidia perturbans dominant. A. vexans larvae heavy due to recent heavy rains. Larval treatments underway. (Minn. Pest Rpt.). OKLAHOMA - Psorophora spp. annoying in Payne County. Larvae up to 50 per dip in temporary pools. Moderate to heavy in Comanche County. (Okla. Coop. Sur.). TEXAS - Adults increased in many urban San Angelo areas. Heavy in Baylor, Hardeman, Knox, and Wichita Counties. (McWhorter, Boring). UTAH - Annoying in farming areas around Richmond and in Logan Canyon, Cache County; abundant and annoying at Boulder, Garfield County, and Abraham, Millard County. (Thornley et al.). CALIFORNIA - Annoyance of Culex tarsalis and other species still heavy in most areas. (Cal. Coop. Rpt.).

SADDLEBACK CATERPILLAR (Sibine stimulea) - ALABAMA - Half-grown larvae heavy on various ornamentals in 3 large nurseries in Mobile and Baldwin Counties. Leaf feeding minor problem, but employees constantly stung or nettled. Control efforts considered. (Norris).

WESTERN BLOODSUCKING CONENOSE (Triatoma protracta) - NEW MEXICO - Bites reported at Las Cruces, Dona Ana County. (N.M. Coop. Rpt.).

AMERICAN DOG TICK (Dermacentor variabilis) - WISCONSIN - Populations still heavy and annoyance severe in most woody and brushy areas in northern four-fifths of State, 32 specimens taken from one Crawford County dog. (Wis. Ins. Sur.). CALIFORNIA - Unusually prevalent at Somerset and Fairplay, El Dorado County. Averaged 5 per week on dogs and ranged 1-2 on people. (Cal. Coop. Rpt.).

BENEFICIAL INSECTS

CONVERGENT LADY BEETLE (Hippodamia convergens) - OKLAHOMA - Very heavy in sunflower fields in Harmon, Jackson, and Tillman Counties. (Okla. Coop. Sur.).

A WEEVIL (Rhinocyllus conicus) - OKLAHOMA - Additional release of 500 adults made June 19 in area infested with musk thistle (Carduus nutans) near Stillwater, Payne County. (Okla. Coop. Sur.). UTAH - Released in musk thistle area below Deer Creek Reservoir in Wasatch County. (Roberts, Jensen).

AN ANTHOCORID BUG (Anthocoris melanocerus) - WASHINGTON - Brought from Wenatchee, Chelan County, and released against Psylla pyricola (pear psylla) in 30-acre commercial pear block at Sawyer, Yakima County, June 12. (Burts et al.).

A MYMARID WASP (Anaphes flavipes) - This parasitoid recovered from Oulema melanopus (cereal leaf beetle) eggs as follows. MICHIGAN - Byron Township, Kent County, and Pierson Township, Montcalm County, June 17 by D. Loree. Determined by personnel of Cereal Leaf Beetle Laboratory at Niles. NEW JERSEY - Near Jamesburg, Middlesex County, June 23. MARYLAND - Cecil and Hartford Counties June 18. Collections in both States by R. Dysart and R. Bingham. Determinations by R. Dysart. All above are new county records. Also recovered in Baltimore

County, Maryland, June 16 by L. Daubert and B. Goolsby. A. flavipes taken in OHIO - Lee, Malaga, and Perry Townships, Monroe County, June 2 by H. Kemp and E. Strasen; Elk and Jefferson Townships, Noble County, June 3 by H. Kemp; Rich, Hill, and Adams Townships, Muskingum County, June 3 by H. Kemp et al.; Liberty and Knox Townships, Guernsey County, June 6 by F. Prentice; Liberty and Pleasant Townships, Fairfield County, June 3 by P. Shipman and E. Strasen; Austinberg, Wayne, and Rome Townships, Ashtabula County, June 13 by E. Strasen; Smith and Goshen Townships, Mahoning County, June 12 by H. Kemp and E. Strasen; Bloomfield, Fowler, and Gustavus Townships, Trumbull County, June 10 by E. Strasen. All determinations by K. Kruse. All above are new county records. PENNSYLVANIA - Solebury Township, Bucks County, June 19; Eden Township, Lancaster County, June 18; Upper Providence Township, Montgomery County, June 16; Lower Mount Bethel Township, June 17; Lower Chanceford, York County, June 18. Collected by R. Dysart and R. Bingham. Determined by R. Dysart. These are new county records. (PPQ). Egg parasitism 47 percent in Indian County oatfield, ranged 68-74 percent in 3 Blair County oatfields. (Kadow).

A EULOPHID WASP (Tetrastichus julis) - Recovered from Oulema melanopus (cereal leaf beetle) larvae as follows. INDIANA - Union Township June 17, Jefferson Township June 9, and Harrison Township June 16, all in Elkhart County by L. Porter. OHIO - Liberty Township, Wood County, June 17 by S. Willie. Determined by personnel of Cereal Leaf Beetle Laboratory at Niles, Michigan. This is a new county record. Also taken at Chester and Plain Townships, Wayne County, June 3 by C. Custer; Jefferson County field insectary, Guernsey County, June 6 by F. Prentice; Greenville Township, Darke County, June 5 by P. Turner; Bedford Township field insectary, Coshocton County, June 5 by P. Shipman. PENNSYLVANIA - Half Moon Township, Centre County, June 3 by A. Proseus; Licking Township, Clarion County, June 3 by J. Murningham and R. Shiner; Wilmington Township, Lawrence County, June 4 by M. Garra and J. Lilley; Franklin Township, Erie County, June 10 by J. Palisin; north Shenango Township field insectary, Crawford County, June 11 by J. Palisin. WEST VIRGINIA - Robinson Magisterial District, Macon County, June 3 by A. Tustin. (PPQ).

A BRACONID WASP (Microctonus aethiops) - MICHIGAN - Parasitism of Hypera postica (alfalfa weevil) adults ranged 1-67, statewide average 26.7 percent. Released in 1973-1975. (Stehr). NEW MEXICO - Adults (200) released for alfalfa weevil control at Belen, Valencia County. (N.M. Coop. Rpt.).

AN ICHNEUMONID WASP (Diaparsis sp.) - WEST VIRGINIA - Parasitized Oulema melanopus (cereal leaf beetle) larvae released at 4 sites in Monroe and one site in Greenbrier County by June 12. (Fulh).

CORRECTIONS

CEIR 25(21):431 - "Decorosiphon carynothrix" should read "Decorosiphon corynothrix."

CEREAL LEAF BEETLE (Oulema melanopus) - Following are all new county records. All determined by R.E. White. MASSACHUSETTS - Adults collected on mixed grasses at Deerfield, Franklin County, May 27, 1975, by W.B. Rose. VIRGINIA - Larvae and adults collected on oats at Glade Springs, Washington County, May 29, 1975, by C.L. Stuart. NEW YORK - Larvae collected on wheat and oats at Le Roy, Jefferson County, and on oats at Lowville, Lewis County, June 13,1975, by H.R. Rockwell. Larvae and adults collected on wheat at New Fane, Niagara County, June 6, 1975, by E.D. Foley. Larvae collected on wheat at Bainbridge, Chenango County, May 22, 1975, by R.B. Gaines. Larvae collected on oats at Charlton, Saratoga County, June 13, 1975, by R. Spaide. Adults collected on oats at Lisle, Broome County, May 23, 1975, by P. Gerber. DELAWARE - Larvae collected on oats at Cowgills Corners, Kent County, June 4, 1975, and at Greenwood, Sussex County, June 13, 1975, by W.A. Merriam. MARYLAND - Larvae collected on oats June 10, 1975, at Chestertown, Kent County, by K.A. Conner and W.A. Merriam, and at Denton, Caroline County, by W.A. Merriam; at Davidsonville, Anne Arundel County, by W.T. Denny, June 6, 1975. Larvae collected on grass at Mitchellville, Prince Georges County, by W.F. Grimpel, May 22, 1975. NEW JERSEY - Larvae collected on wheat at Shirley, Salem County, June 17, 1975, by R.L. Morris. (PPQ).

Cereal leaf beetle in NEW YORK continued light, less than one larva per square foot in Chenango, Delaware, Lewis, Saratoga, and Jefferson Counties. Larvae nearing pupation in Tompkins County. (Brice et al.). PENNSYLVANIA - Adults ranged 1-62 per 100 sweeps, larvae 1-56, and eggs 1-180 per 10 row feet during oat survey in 24 counties June 8-14. Up to 22 percent damage noted. (Kim). WEST VIRGINIA - Larval averages per square foot of oats by county: Greenbriar 5 and Monroe 6 by June 12; Pocahontas 8 (eggs) by June 13; currently Barbour 8 and Randolph 8-10 (high of 250). (Moore et al.). OHIO - Larvae less than 0.1 per square foot of oats in Union, Clark, and Auglaize Counties. (Lewis).

GRASSHOPPERS - NORTH DAKOTA - Heavy; ranged up to 150 (average 42) per square yard in pasture and rangeland in concentrated areas in Sargent County. Rangeland surrounding these areas averaged 8 per square yard. Grasshoppers on marginal land bordering rangeland moved into corn and caused minumum damage. Ranged from first through adult stages with 5-10 percent in first instar and up to 10 percent adults. Melanoplus sanguinipes, M. bivittatus, and M. packardii dominant. Populations in Dickey, Eddy, and parts of LaMoure and Foster Counties averaged less than one per square yard with M. sanguinipes and M. bivittatus dominant. Large majority of nymphs in second and third instar. (Scholl). Nymphal surveys conducted in national grasslands in Billings and Stark Counties ranged 1-2 per square yard with M. sanguinipes dominant. Most nymphs in first instar. Second to fourth instars 3-20 (averaged 9) per square yard on Billings County cropland. M. sanguinipes dominant with some M. differentialis. (Carey). SOUTH DAKOTA - Populations in Custer County up to 40 per square yard at Farmstead, French Creek area, mainly Melanoplus bivittatus. Mixed species of 5-7 per square yard on rangeland near French Creek and Park area. Grasshoppers up to 8 per square yard on 1,000 acres of rangeland south of Hot Springs, Fall River County. (Winks).

NEW MEXICO - Various species, mainly Psoloessa sp., up to 12-16 per square yard in Cimarron Canyon, Union County, and up to 8-10 per square yard near Hayden along Harding and Union County line. Grasshoppers economic near Monero, Rio Arriba County. (N.M. Coop. Rpt.).

JAPANESE BEETLE (Popillia japonica) - CONNECTICUT - Two adults taken at 2 separate locations on Storrs campus June 10 and 11; collection at least 14 days earlier than usual. (Kersting). OHIO - First adults in Perry County June 19. (Shipman). VIRGINIA - Adults fed on snapbeans in City of Virginia Beach June 9 and in clusters on roses June 16. (Craun, Hanley). First adults found in Fluvanna County on grapes, sassafras, and blackberry vines June 16. (Watts). SOUTH CAROLINA - Adults noted in Oconee, Pickens, Anderson, Greenville, and Spartanburg Counties. Populations generally heavier than past 3 years. In addition to normal grape, apple, and rose damage, adults damaging corn (including leaves), beans and various ornamentals. Treatments applied. (McCaskill).

MEXICAN BEAN BEETLE (Epilachna varivestis) - IDAHO - First adult in Boise, Ada County, garden found June 17 in State survey, no eggs or larvae. Control program will be initiated as infestations found. (Moore).

MORMON CRICKET (Anabrus simplex) - IDAHO - Late instars and few adults ranged 2-20 per square yard in localized rangeland areas west of Midvale, Washington County, June 12. (Edmiston, Baird). NEVADA - Second to fourth instars generally averaged 3 per square yard with up to 20 per square yard in localized areas on about 2,700 acres of rangeland in Pony Creek area of Sulphur Spring Range, Elko County. Infestations confined mostly to valley areas with heavy lush vegetation. (Kail).

RED IMPORTED FIRE ANT (Solenopsis invicta) - Following are all new county records. Determinations by D.R. Smith. GEORGIA - Adults collected in pasture at Devereux, Hancock County, March 3, 1975, by W.F. Wood and B.E. Fulford, and on roadside at Pulaski, Candler County, March 11, 1975, by M.T. Sanders. TEXAS - Adults collected in pasture at Fannin City, Goliad County, April 15, 1975, by C.L. Edgar. (PPQ).

DETECTION

New State Records - POTATO STEM BORER (Hydroecia micacea) - NEW YORK - St. Lawrence County. (p. 531). A WEEVIL (Magdalis barbicornis) - PENNSYLVANIA - Montgomery County. (p. 537).

New County Records - CEREAL LEAF BEETLE (Oulema melanopus) MASSACHUSETTS - Franklin. VIRGINIA - Washington. NEW YORK - Jefferson, Lewis, Niagara, Chenango, Saratoga, Broome. DELAWARE - Kent, Sussex. MARYLAND - Kent, Caroline, Anne Arundel, Prince Georges. NEW JERSEY - Salem (p. 542). A EULOPHID WASP (Tetrastichus julis) OHIO - Wood (p. 541). A GRASSHOPPER (Dendrotettix quercus) OKLAHOMA - Pottawatomie (p. 538). A MYMARID WASP (Anaphes flavipes) MICHIGAN - Kent, Montcalm. NEW JERSEY - Middlesex. MARYLAND - Cecil, Hartford. OHIO - Monroe, Noble, Muskingum, Guernsey, Fairfield, Ashtabula, Mahoning, Trumbull. PENNSYLVANIA - Bucks, Lancaster, Montgomery, York (pp. 540-541). RED IMPORTED FIRE ANT (Solenopsis invicta) GEORGIA - Hancock, Candler. TEXAS - Goliad (p.543).

LIGHT TRAP COLLECTIONS

	Temperature °F	Precipitation (inches)	Type of trap (BL = blacklight, I = incandescent, MV = mercury vapor, O = other)	Agrotis ipsilon (black cutworm)	Argyrogramma verbasci (cabbage looper)	Autographa gamma (alfalfa looper)	Peridroma saucia (pale western cutworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Trichoplusia ni (cabbage looper)	Crops
ARIZONA												
Mesa 6/9-15			BL	187		99		12				
COLORADO												
Denver 6/6-12			BL			2		400				
FLORIDA												
Gainesville 6/13-19			BL				13	1				
INDIANA (Counties)												
Knox 6/12-18			BL	50	25							
Gibson 6/12-18			2BL	80	7							
KANSAS												
Manhattan 6/18			BL	4		2						
Rossville 6/18			BL			1		5				
KENTUCKY (Counties)												
Caldwell 6/17			BL	7								
Fayette 6/19			BL	5								
MICHIGAN (Counties)												
Lenawee 6/10-16			BL	26								
Monroe 6/9-15			BL	17								
MINNESOTA												
Fergus Falls 6/12-18			BL									
Worthington 6/12-18			BL									
MISSISSIPPI												
Stoneville 6/13-19	64-93	0.42	2BL	5	6			30	69			
NEW MEXICO (County)												
Dona Ana 6/14-20			3BL	16		10			77			
NORTH DAKOTA												
Bismark 6/15, 17			BL									
Bottineau 6/12, 16			BL									

	Beltia pinguicuscula (tomato hornworm)	Manduca quinquemaculata (tomato hornworm)	Manduca sexta (tobacco hornworm)	Quirina mobilis (European corn borer)	Peridroma saucia (variegated cutworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Spodoptera ornithogalli (yellowstriped armyworm)	Trichoplusia ni (cabbage looper)	Crops
ARIZONA											
Mesa 6/9-15					88		145		7	18	
COLORADO											
Denver 6/6-12											
FLORIDA											
Gainesville 6/13-19			1		2	6	6		4		
INDIANA (Counties)											
Knox 6/12-18		2		11	18	469					
Gibson 6/12-18		13		25		213					
KANSAS											
Manhattan 6/18					8	103			2	1	
Rossville 6/18				7	16	12			1		
KENTUCKY (Counties)											
Caldwell 6/17			1			10			2		
Fayette 6/19						30			2		
MICHIGAN (Counties)											
Lenawee 6/10-16				18	22	426					
Monroe 6/9-15				42	18	126					
MINNESOTA											
Fergus Falls 6/12-18						33					
Worthington 6/12-18						30					
MISSISSIPPI											
Stoneville 6/13-19					77	244			56		
NEW MEXICO (County)											
Dona Ana 6/14-20			9			7	15				
NORTH DAKOTA											
Bismark 6/15, 17						76					
Bottineau 6/12, 16						8					

LIGHT TRAP COLLECTIONS

	Temperature °F	Precipitation (inches)	Type of trap (BL = blacklight, I = incandescent, MV = mercury vapor, O = other vapor)	Agrotis ipsilon (Greasy cutworm)	Feltia subterranea (Granulate cutworm)	Autographa gamma (Silver Y moth)	Peridroma saucia (Variegated cutworm)	Pseudaletia unipuncta (Armyworm)	Spodoptera exigua (Beet armyworm)	Spodoptera frugiperda (Fall armyworm)	Spodoptera praefica (Western yellowstriped armyworm)	Trichoplusia ni (Cabbage looper)	Crops
OHIO													
Wooster 6/14-20			3BL	101		21	73	135	1949			3	
OREGON (County)													
Marion 6/12-18			3BL					4					
PENNSYLVANIA (Districts)													
Central 6/8-17			12BL	43	1		1	14	387				
South East 6/8-17			8BL	19	1		13		91				
SOUTH DAKOTA													
Brookings 6/12-18			BL	6		15	4	11	346				
WISCONSIN													
Lancaster 6/12-18			BL				12	5	37				
Mazomanie 6/12-18			BL	1			11	1	27				

Weather of the week continued from page 528.

developed again in southern Louisiana and in Mississippi. Showers were scattered throughout the Rockies with most of the activity in Montana and spreading into the Dakotas. Gusty wind and blowing dust continued in the Southwest. Thursday, accumulated rainfall had caused flooding from the foothills of the Rockies to the Missouri Valley and south to Kansas and Missouri. Most of the severe weather struck in the central and northern Plains. Fourteen tornadoes were reported from Nebraska through the Dakotas. Other showers and thunderstorms dampened the northern Half of the intermountain region in the Pacific Northwest and gulf coast through the Appalachians into New York. Continuing thunderstorms and heavy rain had increased the area of flooding by Friday, and many rivers in the Plains and Mississippi and Missouri Valley States were out of their banks. Most thunderstorm activity was from northwest Texas to South Dakota and into the western Lakes area. Other storms dotted the northern Rockies, Ohio Valley, gulf coast, and the Southeast. High wind and hot dry weather increased the fire danger in the Southwest. Early Saturday saw heavy rain falling in Utah and Wyoming with showers throughout the central and northern Rockies including already soggy Montana. The most severe activity was little east of yesterday's line from central Texas to Wisconsin. The entire Southeast from the Mississippi Delta to the south Atlantic coast Later, severe weather spread eastward to Illinois and Indiana and the western Lake States and to southwest Texas.

TEMPERATURE: The week began with sharply contrasting temperatures. Monday, a record high was reported at Midland, Texas, and many stations in the southwest topped the 100 degree mark. Early Tuesday, at 2 a.m. the temperature was still hot and dry with 93 degrees at Needles, California. Further north, record low temperatures for the date were being set. Cheyenne, Wyoming, had a low of 35 degrees and North Platte, Nebraska, dropped to 43 degrees. Thursday, a record low temperature was set at Flagstaff, Arizona, with a freezing 29 degrees. Later in the day the thermometer rose to the 90's as far north as southern New England and southern Minnesota. A record high was set at Baltimore of 95 degrees. Except for northern New England, most of the Nation east of the Rockies was warm on Friday. The highest reading was 103 degrees at Carlsbad, New Mexico. The first day of summer, Saturday, saw hot muggy weather moving north into the Ohio Valley and Great Lakes area. Readings in the 90's were common, and Lafayette, Indiana, shared the Nation's high reading with Needles, California, reporting 98 degrees. Alpena, Michigan, had a record high of 85 degrees, breaking the old record of 79 degrees. Sunday, cooler weather had come to the East and remained in the West, but hot muggy weather continued to surge northward into the Central States. Alpena, Michigan set another record with a reading of 93 degrees.

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